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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,796	01/28/2002	Mitsuhiro Koden	70904-56520	7040

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EXAMINER
LAVARIAS, ARNEL C

ART UNIT	PAPER NUMBER
2872	

DATE MAILED: 09/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/937,796	KODEN ET AL.	
	Examiner	Art Unit	
	Arnel C. Lavarias	2872	

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 July 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☒ The proposed drawing correction filed on *14 July 2003* is: a)☒ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *11* .
4) ☒ Interview Summary (PTO-413) Paper No(s). *12* .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings

1. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on 7/14/03 in Paper No. 10 have been approved.

Response to Amendment

2. The amendments to the specification of the disclosure in Paper No. 10, dated 7/14/03, are acknowledged and accepted. In view of these amendments, the objections to the specification in Section 3 of Paper No. 8, dated 4/25/03, are respectfully withdrawn.

3. The amendments to Claims 1-2, 4-8, and 11-14 in Paper No. 10, dated 7/14/03, are acknowledged and accepted. In view of these amendments, the rejections to Claims 1-15 under 35 U.S.C. 112, 2nd paragraph, are respectfully withdrawn.

4. The addition of Claims 16-20 in Paper No. 10, dated 7/14/03, are acknowledged and accepted.

Response to Arguments

5. Applicant's arguments with respect to Claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

6. Claims 1-20 are rejected as follows.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claims 13-15 provide for the use of an optical device and a light output layer, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 13-15 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd.* v. *Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-4, 9-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Ge et al. (U.S. Patent No. 5402143).

Ge et al. discloses an optical control device (See Figure 1), comprising a first substrate (See 72 in Figure 1) with at least one light output layer (See 34 in Figure 1), adjusted in terms of luminance for each gate electrode and in accordance with a maximum luminance which is based on the signal voltages applied to the source electrodes (See col. 4, lines 23-col. 9, line 9); a second substrate with a light transmitting function (See 46 in Figure 1), positioned opposite to the first substrate; a liquid crystal sandwiched between the first and second substrates (See 32, 56 in Figure 1), first gate/scan electrodes, on one of the first and second substrates, for applying multiple scan signals (See 54 in Figure 1), and second source/signal electrodes, on the other of the first and second substrates, for applying multiple signal voltages (See 52 in Figure 1); and a layer with a light polarizing function on the first substrate (See 44 in Figure 1), wherein the light output layer is arranged in stripes and extends in the same direction as the first electrodes (See 78 in Figure 1); and the first substrate, the light output layer, the layer with a light polarizing function, the liquid crystal, and the second substrate are arranged in this order (See Figure 1). Ge et al. additionally discloses the light output layer provided on the first substrate being formed by a light emitting layer composed of a fluorescence device (See 34 in Figure 1; Abstract); the light emitting layer shining with application of a voltage across the first electrodes and the second electrodes (See col. 10, line 44-col. 12, line 59); the light output layer shining with spectrum periodically varying according to a position of the light output layer and varying with each pixel (See 78 in Figure 1); the light output

layers shining when a specified time has elapsed after a set of scan signals are transmitted to the gate electrodes and extinguish before a succeeding set of scan signals are transmitted (See col. 5, line 16-col. 9, line 43), each output layer being either red, green, or blue so that red, green, and blue repeat periodically (See 78 in Figure 1), and the light output layer shining (See for example 352 in Figure 14) for a duration of approximately 15%-40% of each display frame time (See for example Figure 14; col. 12, lines 20-33; it is noted that the frame time is taken as the pulse width of output light pulses 360 in Figure 14).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ge et al. in view of Hodson et al. (U.S. Patent No. 5760858).

Ge et al. discloses the invention as set forth above in Claim 1, except for the light output layer being composed of at least one of an organic/inorganic EL light emitter and an FED light emitter. It is well known in the art of LCD displays to utilize field emission based lighting and EL based lighting in LCD's (See for example Figure 7-8 for a field emission based backlight). Additionally, Hodson et al. teaches a field emission based liquid crystal display (See Figure 4) wherein the integrated backlighting includes an FED

device (See 1, 2, 4 in Figure 4; Abstract). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have the output layer of the optical control device of Ge et al. be composed of an FED light emitter, as taught by Hodson et al., for the purpose of increasing the light output efficiency of the LCD display, while reducing power consumption.

14. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ge et al. in view of Kimura et al. (U.S. Patent No. 5535027), of record.

Ge et al. discloses the invention as set forth above in Claim 1, except for the light output layer including an optical waveguide and a light source coupled to the optical waveguide and positioned in a non-display section area. However, Kimura et al. similarly teaches a liquid crystal display device (See for example Figures 1-7) wherein the light output layer is formed by a combination of an optical waveguide (See for example 22 in Figures 3-4) and a light source (See for example 21 in Figures 3-4) coupled to the optical waveguide and positioned in a non-display section area (See left side of Figure 4 where 21 is located at). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have for the light output layer provided on the first substrate be formed by a combination of an optical waveguide and a light source coupled to the optical waveguide and positioned in a non-display section area, as taught by Kimura et al., in the optical control device of Ge et al. for the purpose of reducing the amount of power consumed by the device since light is no longer wasted in illuminating portions of the display panels that are not required to be illuminated (i.e. light is guided only to those areas of the panel that requires illumination).

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnel C. Lavarias whose telephone number is 703-305-4007. The examiner can normally be reached on M-F 8:30 AM - 5 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 703-305-0024. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.

Arnel C. Lavarias
8/26/03